

**Notice of Allowability**

Application No.

10/749,919

Examiner

Y. J. Han

Applicant(s)

YAN ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to a case filed on 12/31/03.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 31 December 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

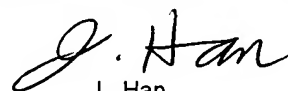
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



J. Han  
Primary Examiner  
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## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1-20 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claim 1 recites, inter alia, a set of inductances comprising a first inductance and a second inductance that connect in series and are coupled with each other, a terminal of said first inductance connected to a connection point at which said third switch and said fourth switch are connected in series and a terminal of said second inductance coupled to said clamp circuit; a transformer comprising a primary winding and a secondary winding, said primary winding connected between a first connection point at which said first switch and said second switch are connected in series and a second connection point at which said first inductance and said second inductance are connected in series; and an output rectifier circuit comprising a rectifier, a filtering capacitor, and a filtering inductance, said output rectifier circuit connected to said secondary winding; wherein when a current in said rectifier is changing a direction of said current, a reverse recovery current of a rectifier diode of said rectifier reflects to a primary side of said transformer and forms an induced current flowing through said first inductance and said primary winding, when said reverse recovery current of said rectifier diode is cut off, said induced current decreases and passes through said set of inductances and said clamp circuit.

Claim 11 recites, inter alia, a set of inductances comprising a first inductance and a second inductance that connect in series and is coupled with each other, a terminal of said first inductance connected to a connection point at which said second switch and said third switch are connected, and a terminal of said second inductance coupled to said clamp circuit; a transformer

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comprising a primary winding and a secondary winding, said primary winding connected between a connection point at which said first diode and said second diode are connected and a connection point at which said first inductance and said second inductance are connected; and an output rectifier circuit comprising a rectifier, a filtering capacitor, and a filtering inductance, said output rectifier circuit connected to said secondary winding; wherein when a current in said rectifier is changing a direction of said current, a reverse recovery current of a rectifier diode of said rectifier reflects to a primary side of said transformer and forms an induced current flowing through said first inductance and said primary winding, when said reverse recovery current of said rectifier diode is cut off, said induced current decreases and passes through said set of inductances and said clamp circuit.

The art of record does not disclose the above limitations, nor would it be obvious to modify the art of record so as to include either of the above limitations.

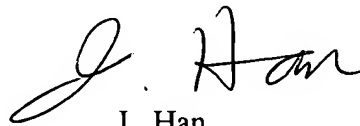
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y. J. Han whose telephone number is 571-272-2078. The examiner can normally be reached on Mon-Fri 5:30am-2:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Han', is positioned above the printed name.

J. Han  
Primary Examiner  
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